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The proportion of steam engine-driven and Diesel engine-driven vessels in the Soviet Merchant Fleet is approximately 40%-60%. Steam turbine-driven vessels are rather a rarity in the Soviet Merchant Fleet and their percentage probably does not exceed 10% to 12% of the entire number of steam engine-driven vessels. Consequently, the proportion of the three vessels within the fleet would be 5%-35%-60%. The Soviet Navy mainly uses steam turbines.

2.

I know of the following plants which construct main propulsion machinery for vessels of the Merchant Fleet

- a. Baltiyskiy Zavod in Leningrad, belonging to the Ministry of Shipbuilding Industry (Ministerstvo Sudostroitel'noy Promyshlennosti);
- b. Zavod Sudomekh in Leningrad, belonging to the Navy;
- c. Zavod imeni Zhdanova (formerly Krasnoye Sormovo) in Gorkiy, belonging to the Ministry of Transport Industry (Ministerstvo Transportnoy Promyshlennosti - MinTransProm);
- d. Kolomenskiy Zavod in Kolomna near Moscow, belonging to the MinTransProm;
- e. Zavod Andre Marty in Leningrad, belonging to the Ministry of Shipbuilding Industry.

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3.

The highest steam condition now in use in steam-driven vessels is, as far as I know, plus 350° Celsius and 22 atmospheres. To my knowledge the only vessel with such a steam condition is the turbo-electro Diesel vessel Vyacheslav Molotov, belonging to the Black Sea State Dry Cargo Steamship Company, Odessa. I have not heard of any projects to increase steam conditions on new ships.

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4.

As far as I know the largest Diesel engine at present installed in the fleet is the one on the Diesel-driven ship Admiral Nakhimov, belonging to the Baltic Steamship Company. This vessel, allegedly received from Germany as part of its reparations, has two eight-cylinder Diesel engines of 4,000 HP each, 140 RPM. I may add that I know of a Soviet-manufactured Diesel engine, the MAN type Diesel engine, manufactured in Zavod imeni Zhdanova; this engine has 1,400 HP, 120 RPM, six cylinders, a 600 mm bore, 1100 stroke, and a mean brake efficiency pressure of 36 atmospheres. The maximum cylinder pressure of these Diesels is 60 atmospheres, and the temperature about plus 900° Celsius. Almost all large, 10,000-ton tankers belonging to the Caspian Petroleum Shipping Company in Baku are equipped with these Diesels.

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5.

Reduction gears in main propulsion drives are used to a very limited extent in the Merchant Fleet. I do not believe, however, that difficulties in manufacturing such gears are the main cause; I rather believe that the difficulties lie in the following:

- (a) The existing ports in the USSR are not capable of receiving large vessels;
- (b) The considerable reduction in exports and imports which eliminates the need for large freighters;
- (c) The conclusion reached by the Soviets that large passenger ships are uneconomical;
- (d) The limited capacities of Soviet shipyards (the largest of which, since the end of World War II, have been fully occupied with the construction of vessels for the Soviet Navy).

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6.

The system of multiple medium-powered RPM Diesels on Soviet vessels is geared to a single propeller shaft mainly by mechanical means and only to a small extent by electrical means (Diesel-elektrokhody).

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I remember that an experiment, started in 1950, tested electro-magnetic reduction gears on two Reydtanker tugboats (teplokhods), the Captain Krasnov and the Metalist. Since 1951 some experiments have been made with several types of pneumatic reduction gears. I know that for such experiments reduction gear machinery is composed of high RPM Diesel, compressor, regenerator, and a steam engine, but I do not know the results of these experiments. 25X1

25X1 7.

The use of Diesel-electric driven engines on seagoing ships started in the USSR after World War II, and only, as far as I know, on ships received as reparations from Germany. I know of but one such ship, the Diesel-elektrokhod, Rossiya. Diesel-electric drive is used more on river ships, and I believe that such drives are manufactured in Zavod imeni Zhdanova in Gorkiy. 25X1

8.

I have heard of the Bauer-Wacht system but I am positive that no system of this kind exists in the Soviet Merchant Fleet.

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